Paper reference BIT01
Pearson BTEC
Level 1 / Level 2 Tech Award

Digital Information Technology

COMPONENT 1: Exploring User Interface Design Principles and Project Planning Techniques

Pearson Set Assignment

June 2023

Time: 6 hours (approximately)

X76341A

Pearson

YOU MUST HAVE

Project_proposal_template.rtf

BIT01_images.zip

YOU WILL BE GIVEN

Data Book.

INSTRUCTIONS

This assessment may be given to learners as soon as it is received. This assessment is for use with the May 2023 – June 2023 moderation series. Please refer to the Administrative Support Guide for further information and mark submission deadlines.

INSTRUCTIONS TO LEARNERS

You should read the information given in the vocational context and each task section of this assignment carefully prior to starting work. Tasks often link to one another, so it is important to make sure you understand all tasks before starting the assignment.

The assignment will take approximately 6 supervised hours to complete.

This is divided into approximately:

- **1.5 hours to complete Task 1a and Task 1b**
- **1.5 hours to complete Task 2**
- **2 hours to complete Task 3**
- **1 hour to complete Task 4**

(continued on the next page)

INSTRUCTIONS TO LEARNERS continued

These timings are for guidance only, but should be used as an indication of how long to spend on each task. Your teacher will advise you when it is time to move from one task to the next.

You must save your work in your folder using the following naming convention:

- **Task 1a**
- **Task 1b**
- **Task 2**
- **Task 3**
- **Task 4**

Remember to save your work regularly.

You must work independently and should not share your work with other learners. All work must be your own and you must sign a declaration of authenticity to confirm this.

(continued on the next page)

INSTRUCTIONS TO LEARNERS continued

Any sources of information, ideas, text, audio and / or visual assets created by others that you include in your work MUST be clearly identified and referenced. Using the work of others as your own or without proper acknowledgement is considered plagiarism and can result in disqualification from the assessment.

You may ask your teacher for support if you have questions about the requirements of tasks, what evidence you need to produce and any resources you are allowed to access, such as your own course notes. They cannot give you feedback about how to improve your work, or guide you to solutions to any questions or problems in the tasks.

VOCATIONAL CONTEXT

A company called The Ski Arena needs a digital information point for customers to its venue.

The information point will be used to find the location and details of the facilities, lessons and virtual reality ski simulator.

The information point will consist of 4 screens that will be accessed using the customer's handheld devices and touch screens positioned around the venue.

TASKS

Supervised hours to complete the task

Learners would need approximately 1.5 hours to complete Task 1.

Task 1

Information about the user interface can be found in the project proposal brief. This includes:

- **a project proposal**
- **planning timescales.**

Task 1a – Project proposal

Complete the Project_proposal_template.rtf to include:

- **purpose and audience of the project**
- **project requirements**
- **user accessibility requirements**
- **constraints.**

(continued on the next page)

Task 1 continued

Task 1b – Planning timescales

Use a project planning tool to show:

- **timescales, including tasks and sub–tasks**
- **key milestones**
- **task dependencies.**

Use today's date as the start date of the project.

Learning outcomes covered

OUTCOME A: Understand interface design for individuals and organisations.

OUTCOME B: Be able to use project planning techniques to plan, design and develop a user interface.

(continued on the next page)

Task 1 continued

Checklist of evidence required

- Completed project proposal template.
- Planning timescale in either a word–processed table, spreadsheet software or project management software.

Resources needed

- Project_proposal_template.rtf
- Software to create a project timescale.

(Total for Task 1 = 24 marks)

Task 2 – Interface designs

Supervised hours to complete the task

Learners would need approximately 1.5 hours to complete Task 2.

The user interface for the information point must allow customers to find the location and details of lessons, facilities and the virtual reality ski simulator.

The information point will be accessed using touch screens positioned around the Ski Arena.

Your user interface should:

- **be easy to use**
- **use appropriate design principles**
- **include different accessibility features.**

(continued on the next page)

Task 2 continued

Produce designs for four screens of the user interface.

Your designs should include these screens:

- **home**
- **lessons**
- **facilities**
- **virtual reality ski simulator.**

Use the images provided in the separate Data Book and information in the RESOURCE document on pages 19 – 21.

You do not have to use all of the images and information.

Learning outcomes covered

OUTCOME A: Understand interface design for individuals and organisations.

OUTCOME B: Be able to use project planning techniques to plan, design and develop a user interface.

(continued on the next page)

Task 2 continued

Checklist of evidence required

Computer–generated designs for four screens of the user interface.

Resources needed

- **BIT01_images.zip**
- **Appropriate software to create the designs.**

(Total for Task 2 = 12 marks)

Task 3 – User interface prototype

Supervised hours to complete the task

Learners would need approximately 2 hours to complete Task 3.

Use your user interface designs to create a working prototype of the user interface.

Your prototype should include these screens:

- **home**
- **lessons**
- **facilities**
- **virtual reality ski simulator.**

Use the images provided in the separate Data Book and information in the RESOURCE document on pages 19 – 21.

(continued on the next page)

Task 3 continued

Learning outcomes covered

OUTCOME A: Understand interface design for individuals and organisations.

OUTCOME B: Be able to use project planning techniques to plan, design and develop a user interface.

Checklist of evidence required

Electronic copy of your prototype.

Resources needed

- BIT01_images.zip
- Appropriate software to create the user interface prototype.

(Total for Task 3 = 12 marks)

Task 4 – User interface review

Supervised hours to complete the task

Learners would need approximately 1 hour to complete Task 4.

1. **Review your user interface. You should consider the strengths and weaknesses of the interface against:**
   - **user requirements**
   - **ease of use**
   - **design principles used**
   - **accessibility features.**

2. **Suggest improvements that could be made to your user interface to better meet the audience needs.**

(continued on the next page)

Task 4 continued

Learning outcomes covered

OUTCOME C: Be able to review a user interface.

Checklist of evidence required

A word–processed review

Resources needed

None

(Total for Task 4 = 12 marks)

PROJECT PROPOSAL

Project proposal brief

The Ski Arena needs a digital information point.

The digital information point will be used by customers to find the location and details of the facilities, lessons and virtual reality ski simulator.

The digital information point will be accessed using touch screens positioned around the Ski Arena.

The audience for the information point will be adults, families with young children and visitors with accessibility needs.

The information point should be easy to navigate.

The location and details of facilities and virtual reality ski simulator should be clear and accessible.

The digital information point budget is £7900 and the planned installation date is in 12 weeks' time.

(continued on the next page)

PROJECT PROPOSAL continued

Planning timescales

It is estimated that the digital information point will take 12 weeks to complete.

Design stage (3 weeks total):

- **research existing user interfaces**
- **project proposal**
- **produce initial designs.**

Development stage (7 weeks total):

- **prototyping**
- **implementation.**

Review stage (2 weeks total):

- **user interface.**

Throughout the project, you will also need to schedule meetings with the client.

RESOURCE DOCUMENT

Look at the images in the separate Data Book.
Select the images that you want to use, you do not have to use all of the images.

Select any information

Select the information that you want to use, you do not have to use all of the information.

Opening times and facilities

We are open every day
Monday to Friday 9 am to 9 pm
Saturday and Sunday 10 am – 4 pm

Ski slope with ice slide – Downhill Donuts –
Sledge 'n' Slide.

Children's ski lessons and Penguin Club.

Adult snowboard and ski lessons.

Children under the age of 12 years must be accompanied by an adult.

(continued on the next page)

RESOURCE DOCUMENT continued

Lessons

Adult snowboard and ski lessons levels 1 – 5

6 × 2–hour lessons from £270.

Children's ski lesson 6 × 1–hour lessons and Children's snowboard lessons 6 × 1–hour lessons from £120.

Penguin Club from £10 per hour.

We also offer private lessons.

Chalet Bar

We serve a selection of healthy snacks and food including whole–grain bread and pasta, salads, and plant–based protein.

Carbs for energy

Protein to repair hard–working muscles

Children's menu

(continued on the next page)

RESOURCE DOCUMENT continued

Kitchen

Sports drinks for energy

Hot and cold drinks

Free water

Virtual reality ski simulator

Enjoy the full 3D effects of the latest virtual reality headset technology.

Ski using the simulator triple screen

Ski like a professional athlete at high speed

£45 per hour

Book now

TOTAL FOR PAPER = 60 MARKS

END OF PAPER